Remarks/Arguments

As of the Office Action mailed February 21, 2006 claims 1-6 are pending in the application and stand rejected. Reexamination and reconsideration are respectfully requested in light of the amendments and remarks/arguments herein.

Amendments to the Claims

Claim 1 has been cancelled rendering the rejection under 35 USC 112 first paragraph moot.

Claim 6 has been amended to recite increasing said crystallization onset temperature above 675° C. by the addition of said lanthanide element and increasing said reduced crystallization temperature up to approximately 22%. Support for this amendment may be found, for example in paragraph 0019 of the published application which recites that "[t]he Gd addition to the alloy increased the reduced crystallization temperature from 0.5 to 0.61 for the ALLOY A series alloy (unmodified alloy to Gd modified alloy)" which supports an increase of about 22% and from 0.56 to 0.61 in the ALLOY B series alloys (unmodified alloy to Gd modified alloy)" which supports an increase of about 8.9%.

Applicant agrees with the Examiner's statement regarding the increase of the reduced crystallization temperature that "these examples provide support for those individual data points, and perhaps for points in between." In addition, Applicant asserts that a person of ordinary skill in the art would also understand that:

- the disclosure describes additions of a lanthanide element, such as Gd, as low as 0.01 at%. See paragraph 0015 of the published application which recites that:

> "Preferably the lanthanide additions are combined at levels in the range of 0.01 atomic % to 50% atomic percent…"

- and at such lower additions, the increase in the reduced crystallization temperature would be less than 22%.

Accordingly, Applicant believes that in light of the Examiner's remarks and the above, a person of ordinary skill in the art would understand that the specification would allow for an increase in reduced crystallization temperature of up to 22%. Applicant therefore respectfully asserts that the rejection under 35 USC 112, first paragraph should be withdrawn with respect to claim 6. No new matter has been added by this amendment.

Claim 6 has also been amended to recite "wherein said reduced crystallization temperature is the ratio of the crystallization temperature to the melting temperature" as requested by the Examiner. No new matter has been added by this amendment. Applicant respectfully asserts that this amendment renders the rejection under 35 USC §112, second paragraph moot.

Additionally, claim 6 has been amended to recite "supplying an iron based alloy comprising 30-90 atomic percent iron with Cr, Mo, W, B, C, Si and Mn." Support for this amendment may be found, for example, in Table 1. No new matter has been entered by this amendment.

Furthermore claim 6 has been amended to recite "adding" rather than "addition." No new matter has been added by this amendment.

Claims 2-5 have been amended to depend from claim 6. No new matter has been added by this amendment.

Rejections Under 35 USC §102/103

Claims 1-6 stand rejected under 35 U.S.C. §103 as being unpatentable over JP357051237A (hereinafter referred to as JP '237).

Applicant points out that present claim 6, as amended, recites "supplying an iron based alloy comprising 30-90 atomic percent iron, with Cr, Mo, W, B, C, Si, and Mn." JP '237 fails to teach or suggest providing such an alloy to which a lanthanide element may be added. In particular, JP '237 discloses adding, for example, chromium, tungsten, etc., to an alloy different than what is recited to increase the crystallization temperature, wherein the increase "is about 50°C at most" but does not disclose providing an iron alloy with the specific elemental combination of 30-90 atomic percent iron with Cr, Mo, W, B, C, Si, and Mn **to which** a lanthanide element may be added and increasing the crystallization temperature above 675°C and increasing the reduced crystallization temperature of the iron alloy.

In addition, the Applicant respectfully refutes the Examiner's assertion that the JP '237 disclosure indicates that the reference's process is generically applicable to alloys containing as much as 75 atomic % iron and is at a loss as to where the reference indicates such subject matter. JP '237 recites that "various modifications are permitted as long as other requirements are

satisfied." The reference however, discloses the addition of iron to the alloys only between approximately 10.35 and 22.2 atomic %.

Moreover, the Examiner, in advancing a restrictive view regarding the increase in reduced crystallization temperature, is consistent with the view that the art at issue is not broadly extendible in terms of compositional features. Accordingly, JP '237 must necessarily be limited to the particular alloys and may not be viewed as a reference that would be applicable to the alloy compositions and effects noted herein.

Furthermore, claims 1-5 stand rejected under 35 USC §103 as being unpatentable over Kudo et al. U.S. Patent No. 4,668,310. Accordingly, claim 1 has been cancelled and claims 2-5 have been amended to depend upon claim 6. Therefore, the Applicant respectfully asserts that the rejection in view of Kudo as to claims 2-5 has been rendered moot.

In light of the above, Applicant respectfully submits that claims 2-6 are not taught or suggested by the cited references. In consideration of the foregoing Applicant respectfully requests that the rejections of claims 1-6 are withdrawn upon reconsideration.

Having overcome all of the outstanding rejections, it is respectfully submitted that the application is now in condition for allowance. Early and favorable action is respectfully solicited. In the event that there are any fee deficiencies, or additional fees are payable, please charge, or credit any overpayment to, our Deposit Account No. 50-2121.

Respectfully submitted,

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